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Agriculture Victoria Services Pty Ltd PG7/770 1 4 OCT 2003
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Lys Leu Gly Leu Lys Ala Lys Ile Leu Thr His Val Arg Cys His Met
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Lolium perenne

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val	Pro 290	val	val	Gly	Gly	His 295	Ala	Gly	Ile	Thr	Ile 300	Leu	Pro	Leu	Leu
ser 305	Lys	Thr	Arg	Pro	Ser 310	val	Ser	Phe	Thr	Asp 315	Glu	Glu	Thr	Glu	G1n 320
Leu	Thr	Lys	Arg	11e 325	Gln	Asn	Ala	Gly	Thr 330	Glu	Ala	val	Glu	Ala 335	Lys
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Phe	Val	G]u 355	Ser	Ser	Leu	Arg	А1а 360	Met	Ala	Gly	Asp	Pro 365	Asp	val	Tyr
Glu	Cys 370	Thr	Tyr	Val	Gln	Ser 375	Glu	Leu	Thr	Glu	Leu 380	Pro	Phe	Phe	Аlа
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cggtcagcgc gcagtccgct ctggtttcga aaccaaggaa tcatggcagc acgagcttcg
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Page 178

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Arg Pro His Leu Ser Lys Glu Val Met Asp Thr Ser Lys Pro Ala Ser 50 60
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Lolium perenne

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Lys Lys Lys Ser Ala Lys His Tyr Ile Glu Phe Trp Lys Gln Val Pro 50 60
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60

120

180

240

300

360

420

480

540

600

644

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100 105 110
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115 120 125
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Glu Ser Leu Asn Gly Val Lys Met Glu Leu Val Asp Ala Ala Phe Pro 50 60

Leu Leu Lys Gly Val Val Ala Thr Thr Asp Val Val Glu Ala Cys Thr 65 70 75 80

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Trifolium repens

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Trifolium repens

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DNA

Trifolium repens

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Gln Val Asn Phe Lys Thr Phe Ser Gly Leu Lys Ala Met Ser Ser Leu 35 40 45

Arg Cys Glu Ser Glu Ser Ser Phe Phe Gly Asn Glu Thr Ser Ala Ala 50 60

Leu Arg Ala Thr Phe Ala Pro Lys Ala Gln Lys Glu Asn Gln Asn Ile 65 70 75 80

Asn Arg Asn Leu His Pro Gln Ala Ser Tyr Lys Val Ala Val Leu Gly 85 90 95

Ala Ala Gly Gly Ile Gly Gln Pro Leu Ala Leu Leu Ile Lys Met Ser 100 105 110

Pro Leu Val Ser Asp Leu His Leu Tyr Asp Ile Ala Asn Val Lys Gly 115 120 125

Val Ala Ala Asp Ile Ser His Cys Asn Thr Pro Ser Lys Val Leu Asp Page 253

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Trifolium repens

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Leu Thr Ser Phe His Cys Arg Ala Lys Gly Gly Ala Pro Gly Phe Lys 35 40 45

Val Ala Ile Leu Gly Ala Ala Gly Gly Ile Gly Gln Pro Leu Ser Met 50 55 60

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Val Ser Ile Tyr Lys Ala Gln Ala Ser Ala Leu Glu Glu His Ala Ala

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Thr Leu Cys Glu Ala Ile Ala Lys Arg Cys Pro Lys Ala Ile Val Asn 145 150 155 160

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Phe Lys Arg Ala Gly Thr Tyr Asp Pro Lys Arg Leu Leu Gly Val Thr 180 185 190 Page 276

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35 40 45
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His Ala Leu Thr Arg Leu Asp Glu Asn Arg Ala Lys Cys Gln Leu Ala 65 70 75 80
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85 90 95

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Glu Glu Phe Thr Glu Lys Val Gln Lys Arg Gly Gly Val Leu Ile Gln 130 135 140

Lys Trp Gly Arg Ser Ser Ala Ala Ser Thr Ser Val Ser Ile Val Asp 145 150 155 160

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660

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Lys Asn Gln Thr Val Asp Leu Val Leu Thr Ala His Pro Thr Gln Ser 165 170 175

Val Arg Arg Ser Leu Leu Gln Lys His Gly Arg Val Arg Asn Cys Leu 180 185 190

Ser Gln Leu Tyr Ala Lys Asp Ile Thr Pro Asp Asp Lys Gln Glu Leu 195 200 205

Asp Glu Ala Leu Gln Arg Glu Ile Gln Ala Ala Phe Arg Thr Asp Glu 210 215 220

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<212> PRT <213> Trifolium repens

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Pro Ser Ser Ser Asn Thr Asp Leu Tyr Ser Glu Met Lys Glu Leu Val 35 40 45

Pro Glu Tyr Gln Glu Arg Val Lys Lys Leu Lys Lys Asp His Gly Ser 50 60

Val Glu Leu Gly Lys Ile Thr Ala Asp Met Val Leu Gly Gly Met Arg 65 70 75 80

Gly Met Thr Ala Leu Val Trp Leu Gly Ser Ala Val Asp Pro Asp Glu 85 90 95

Gly Ile Arg Phe Arg Gly Met Thr Ile Pro Asp Cys Gln Lys Thr Leu 100 105 110

Pro Gly Ala Phe Pro Gly Gly Glu Pro Leu Pro Glu Ala Ile Leu Trp 115 120 125

Leu Leu Leu Thr Gly Lys Val Pro Ser Lys Glu Gln Val Asp Ser Leu 130 135 140

Ala His Glu Leu Arg Ser Arg Ala Lys Ile Pro Glu Tyr Ala Tyr Lys 145 150 155 160

Ala Ile Asp Ala Leu Pro Val Ser Ala His Pro Met Thr Gln Phe Ser 165 170 175

Thr Gly Val Met Ala Leu Gln Val Glu Ser Glu Phe Thr Lys Ala Tyr 180 185 190

Glu Gly Gly Ile His Lys Ser Arg Tyr Trp Glu Pro Thr Tyr Glu Asp 195 200 205

Ser Leu Asn Leu Ile Ala Arg Leu Pro Gly Ile Ala Ala Tyr Ile Tyr Page 327

Arg Arg Ile Tyr Lys Asp Gly Lys Ile Ile Pro Leu Asp Asp Ser Leu 225 230 235 240 Asp Tyr Gly Ala Asn Tyr Ala His Met Leu Gly Phe Asp Asp Pro Glu 245 250 255 Thr Leu Glu Phe Met Arg Leu Tyr Ile Ser Ile His Ser Asp His Glu 260 265 270 Gly Gly Asn Val Ser Ser His Thr Ala His Leu Val Ala Ser Ser Leu 275 280 285 Ser Asp Pro Tyr Leu Ala Phe Ala Ala Ala Leu Asn Gly Leu Ala Gly 290 295 300 Pro Leu His Gly Leu Ala Asn Gln Glu Val Leu Arg Trp Ile Arg Asn 305 310 315 Ile Val Lys Glu Phe Gly Thr Pro Asn Ile Ser Thr Glu Gln Leu Ser 325 330 335 Asp Tyr Ile His Lys Thr Leu Asn Ser Gly Gln Val Val Pro Gly Tyr 340 345 350 Gly His Gly Val Leu Arg Asn Thr Asp Pro Arg Tyr Thr Cys Gln Arg 355 360 365 Glu Phe Ala Leu Lys His Leu Pro Asn Asp Pro Leu Phe Gln Leu Val 370 375 380 Ser Lys Ile Lys Glu Val Val Pro Pro Ile Leu Thr Lys Leu Gly Lys 385 390 395 400 Val Lys Asn Pro Trp Pro Asn Val Asp Ala His Ser Gly Val Leu Leu 405 410 415 Asn Tyr Tyr Gly Leu Thr Glu Glu Asn Tyr Tyr Thr Val Leu Phe Gly 420 425 430 Val Ala Arg Ser Ile Gly Val Gly Pro Gln Leu Ile Trp Asp Arg Ala 435 440 445 Leu Gly Met Pro Leu Glu Arg Pro Lys Ser Val Thr Leu Glu Lys Leu 450 460

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Page 329

1620

1680

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Pro Ser Ser Ser Asn Thr Asp Leu Tyr Ser Glu Met Lys Glu Leu Val 35 40 45

Pro Glu Tyr Gln Glu Arg Val Lys Lys Leu Lys Lys Asp His Gly Ser 50 60

Val Glu Leu Gly Lys Ile Thr Ala Asp Met Val Leu Gly Gly Met Arg 65 70 75 80

Gly Met Thr Ala Leu Val Trp Leu Gly Ser Ala Val Asp Pro Asp Glu 85 90 95

Gly Ile Arg Phe Arg Gly Met Thr Ile Pro Asp Cys Gln Lys Thr Leu 100 105 110

Pro Gly Ala Phe Pro Gly Gly Glu Pro Leu Pro Glu Ala Ile Leu Trp 115 120 125

Leu Leu Leu Thr Gly Lys Val Pro Ser Lys Glu Gln Val Asp Ser Leu 130 135 140

Ala His Glu Leu Arg Ser Arg Ala Lys Ile Pro Glu Tyr Ala Tyr Lys 145 150 155 160

Ala Ile Asp Ala Leu Pro Val Ser Ala His Pro Met Thr Gln Phe Ser Page 330 165 170 175

Thr Gly Val Met Ala Leu Gln Val Glu Ser Glu Phe Thr Lys Ala Tyr 180 185 190 Glu Gly Gly Ile His Lys Ser Arg Tyr Trp Glu Pro Thr Tyr Glu Asp 195 200 205 Leu Asn Leu Ile Ala Arg Leu Pro Gly Ile Ala Ala Tyr Ile Tyr 210 220 Arg Arg Ile Tyr Lys Asp Gly Lys Ile Ile Pro Leu Asp Asp Ser Leu 225 230 235 240 Asp Tyr Gly Ala Asn Tyr Ala His Met Leu Gly Phe Asp Asp Pro Glu 245 250 255 Thr Leu Glu Phe Met Arg Leu Tyr Ile Ser Ile His Ser Asp His Glu 260 265 270 Gly Gly Asn Val Ser Ser His Thr Ala His Leu Val Ala Ser Ser Leu 275 280 285 Ser Asp Pro Tyr Leu Ala Phe Ala Ala Ala Leu Asn Gly Leu Ala Gly 290 295 300 Pro Leu His Gly Leu Ala Asn Gln Glu Val Leu Arg Trp Ile Arg Asn 305 310 315 320 Ile Val Lys Glu Phe Gly Thr Pro Asn Ile Ser Thr Glu Gln Leu Ser 325 330 335 Asp Tyr Ile His Lys Thr Leu Asn Ser Gly Gln Val Val Pro Gly Tyr 340 345 350 Gly His Gly Val Leu Arg Asn Thr Asp Pro Arg Tyr Thr Cys Gln Arg 355 360 365 Glu Phe Ala Leu Lys His Leu Pro Asn Asp Pro Leu Phe Gln Leu Val 370 375 380 Ser Lys Ile Lys Glu Val Val Pro Pro Ile Leu Thr Lys Leu Gly Lys 385 390 395 400 Val Lys Asn Pro Trp Pro Asn Val Asp Ala His Ser Gly Val Leu Leu 405 410 415 Asn Tyr Tyr Gly Leu Thr Glu Glu Asn Tyr Tyr Thr Val Leu Phe Gly

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Pro Ser Ser Ser Asn Thr Asp Leu Tyr Ser Glu Met Lys Glu Leu Val 35 40 45

Pro Glu Tyr Gln Glu Arg Val Lys Lys Leu Lys Lys Asp His Gly Ser 50 60

Val Glu Leu Gly Lys Ile Thr Ala Asp Met Val Leu Gly Gly Met Arg 65 70 75 80

Gly Met Thr Ala Leu Val Trp Leu Gly Ser Ala Val Asp Pro Asp Glu 85 90 95

Gly Ile Arg Phe Arg Gly Met Thr Ile Pro Asp Cys Gln Lys Thr Leu 100 105 110

Pro Gly Ala Phe Pro Gly Gly Glu Pro Leu Pro Glu Ala Ile Leu Trp 115 120 125

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<212> PRT

<213> Trifolium repens

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G] u	Phe 370	Ala	Leu	Lys	His	Leu 375	Pro	Asn	Asp	Pro	Leu 380	Phe	Gln	Leu	val
Ser 385	Lys	Ile	Lys	Glu	Va1 390	Val	Pro	Pro	Ile	Leu 395	Thr	Lys	Leu	Gly	Lys 400

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